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(71)Applicant : MURATA MFG CO LTD

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(72)Inventor : AKI YASUSHI
KATAYA TAKESHI
HIROSHIMA TAKASHI

(54) VOLTAGE CONTROLLED OSCILLATOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a voltage controlled oscillator providing a strip line resonator in the inside layer of a multilayer substrate and less in the dispersion of oscillation frequency by humidity.

SOLUTION: Polytetrafluoroethylene is used as the core material of the multilayer substrate. Since the polytetrafluoroethylene has smaller water absorptivity than glass epoxy, the change of dielectricity to the change of humidity. As a result, also the change of the resonant frequency of the strip line resonator formed in the inside layer of the multilayer substrate is small, as a result, also the change of oscillation frequency becomes small. Then, since the change of the oscillation frequency is small, control voltage sensitivity can be reduced, and thus, C/N characteristics is improved. Then, since also the property of the polytetrafluoroethylene material itself is small in dielectric loss comparing with the glass epoxy and also specific dielectricity is small, the Q of resonant system is improved, and thereby, the C/N characteristics is improved too.

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